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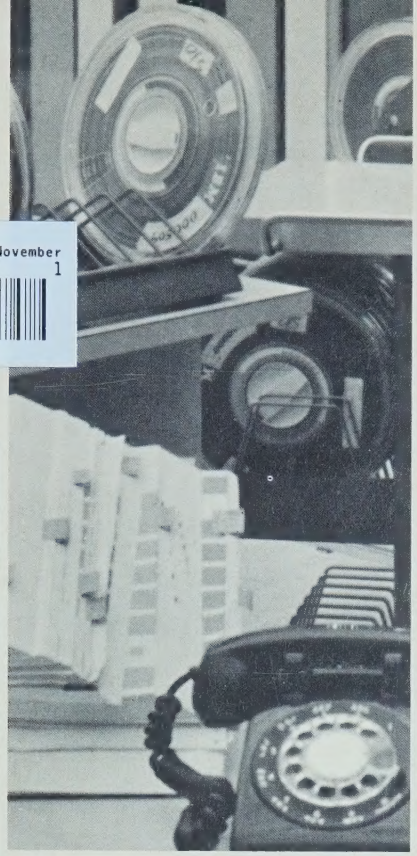

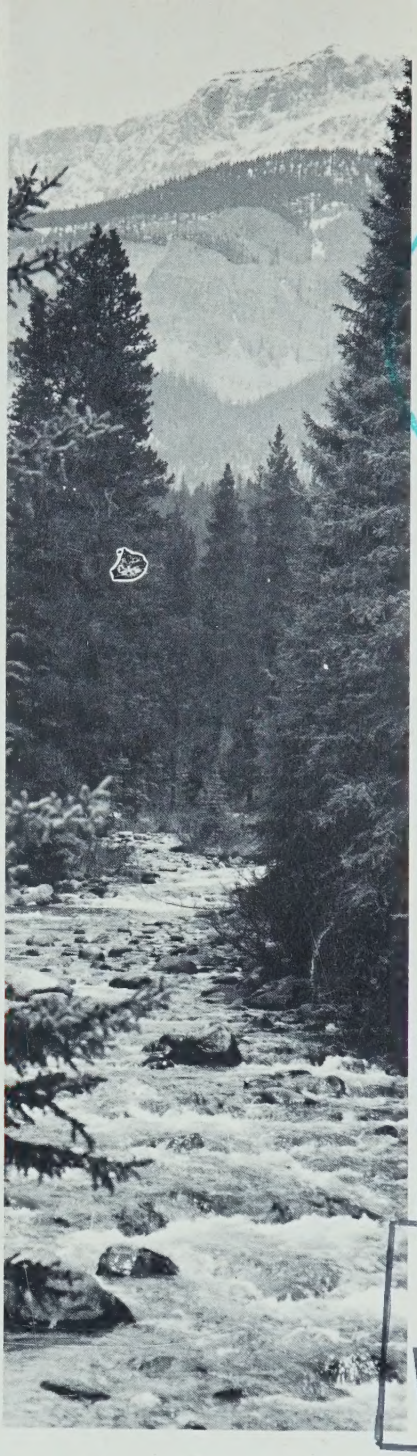

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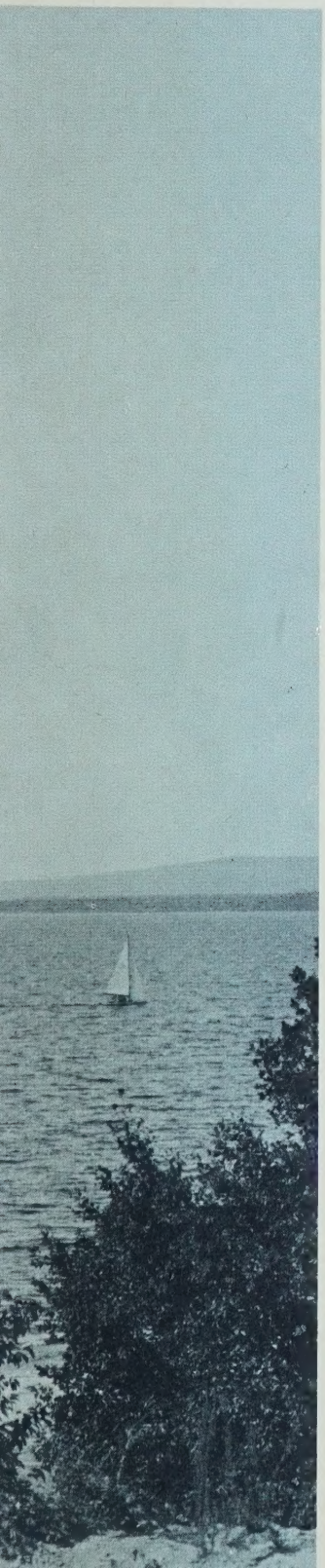

alberta
department
of the
environment

HON. W. J. YURKO, MINISTER

DR. E. E. BALLANTYNE, DEPUTY MINISTER

Municipal Engineering Branch

AUTOMOBILE DISPOSAL IN ALBERTA

November, 1972

POLLUTION CONTROL
DIVISION

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ALBERTA DEPARTMENT OF THE ENVIRONMENT
POLLUTION CONTROL DIVISION
MUNICIPAL ENGINEERING BRANCH

Prepared by: J. H. Turnbull, P. Eng.

AUTOMOBILE DISPOSAL IN ALBERTA

November, 1972

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I. RECOMMENDATIONS

1. All municipalities must be required to assume responsibility for the collection and disposal of derelict vehicles within their area.

2. The provincial government should assist the municipalities in providing this necessary service.

The Department of Highways should:

a) Establish an automobile disposal fund by assessing a $1.00 annual levy against all registered motor vehicles.

b) Co-ordinate the disposal of collected vehicles from the municipal "holding sites" and administer the contracting of this work with revenues from the disposal fund.

The Department of Health should:

a) Approve and administer the municipal holding sites.

The Department of the Environment should:

a) Activate the implementation of the program.

b) Ensure province wide effectiveness by enforcing the Litter Act.

II. INTRODUCTION

The disposal of car bodies is an expensive and difficult task. Although waste disposal is the responsibility of the municipalities, most are reluctant to enforce the clean-up of derelict vehicles because of the expense which would be necessary. The problem is aggravated by a continuing increase in the number of cars and the decreasing effectiveness of the scrap metal industry with respect to vehicle disposal. Consequently, complaints about unsightly automobiles are becoming more frequent.

Both the urban and rural municipalities associations of Alberta have requested assistance in dealing with this increasing problem. They maintain that financial assistance should be given by the Provincial Government for automobile disposal because the province imposes and collects all license and permit fees with respect to motor vehicles used on the highways. Furthermore, they point out that Section 224 of the Highway Traffic Act provides that a municipality has no power to pass a by-law requiring from any owner or operator of a motor vehicle any tax, fee, license or permit for the use of the public highways.

Some communities resent having to pay for the handling and disposal of vehicles abandoned in their area by non-residents. They feel that this points out another reason why there should be some provincial responsibility in the matter.

Municipalities receive numerous time-consuming complaints from citizens about old car bodies. In general, cities and towns are genuinely concerned about the problem and are willing to co-operate in a program that would enable them to clean up their areas without undue strain on their financial capabilities.

III. PRESENT SITUATION

Many car bodies are presently being recycled in Alberta due mainly to the fact that a large steel mill exists in both major cities. In Calgary, Western Canada Steel Ltd. purchases shredded car body steel from Navajo Metals Ltd. The Steel Company of Canada mill in Edmonton buys baled automobile scrap from Harpers Metal Ltd. of Red Deer and Shugarmans' Ltd. of Edmonton. These steel mills are also importing scrap from the United States at a considerably higher cost (over double the price paid locally) due to additional transportation expenses. Even if these steel mills were able to buy the scrap from every single vehicle retired in Alberta, there would still be insufficient scrap generated within the province to meet their basic requirements. This is reported to be the case at practically every steel mill in Canada.

An estimated 50,000 vehicles are presently being retired in Alberta annually. Private companies within the province claim they have facilities of sufficient capacity to process all of these vehicles in a manner acceptable to the steel mills. Approximately two-thirds of the province's automobile recycling capacity is provided by a single shredder in Calgary owned by Navajo Metals Ltd.

The economics of recycling car bodies are worsening. Labour, equipment, transportation and pollution control costs are increasing faster than the price of steel. Until recently, it was profitable for a scrap dealer to purchase car bodies

located within a reasonable distance from his plant. This factor, combined with less automobiles in circulation, kept the disposal problem in check at very little cost to local municipalities. Today, a car must be delivered free to the premises of the scrap processors before they will accept it. In the future, it may be necessary for the processor to charge a disposal fee for a car body proffered at his gate. The steel companies, in turn, can only afford to pay the processor a certain price for automobile scrap. This price (currently $23 per ton baled and $33 per ton shredded) is dictated by the economics of obtaining steel from iron ore versus scrap iron and by the necessity of remaining competitive with other steel producers.

Most of the vehicles that are disposed of in Edmonton, Calgary and Red Deer are presently being recycled. There are automobile scrap processing facilities in these cities and recycling is the cheapest disposal method available. Several other communities have also recycled some of their junk cars by paying to have them picked up by a processor.

The vastness of Alberta is both an advantage and disadvantage with respect to car disposal. The advantage is that the environment can and is absorbing thousands of car bodies. Many are buried in landfills (a presently accepted method of disposal that is being seriously questioned). Recycling automoble bodies into the steel making

process is a preferred practice. The high cost of transporting derelict automobiles long distances is the only apparent deterrent to recycling at the present time.

Once a number of vehicles have accumulated at a landfill site, it costs an estimated $1.50 per vehicle to compact and bury them with a bulldozer, which periodically is required at the landfill site for other purposes. By comparison, the cost of transporting car bodies to a processor averages about $10.00 per vehicle in the southern half of the province and $20.00 per vehicle in the northern half. These cost estimates are based on tenders, which were accepted by the Department of Highways for removing car bodies from different areas of the province, under a trial clean-up program. It should be noted that these costs are very much related to existing circumstances and are sensitive to change. For example, the presence of a second shredder in the Edmonton area would reduce the high transportation cost for removing car bodies in the northern areas. This is unlikely to occur, however, because there are not enough car bodies within the province to support a second high volume shredder. The owners of Navajo Metals Ltd. of Calgary claim that their shredder is presently underutilized. If this shredder was not in operation, the costs of recycling cars under the Department of Highways clean-up program could have been higher.

IV. TASK FORCE PROPOSALS

The Solid Waste Management Committee of the Task Force on Urbanization and the Future investigated the problems caused by derelict automobiles. The conclusions and recommendations of the derelict auto sub-committee made up of provincial and municipal government representatives are included in the final report of the Task Committee on Solid Waste Management entitled "Waste Not: Want Not". These proposals for solving the derelict auto problem can be divided into the following categories: collection of derelict vehicles, disposal of the collected vehicles, financing the program and legislation.

A. Collecting Derelict Vehicles

1. It is recommended that legislation be enacted to provide that each Municipal government is responsible for keeping its area free of derelict automobiles.

2. Each municipality, on its own or in co-operation with surrounding municipalities, should establish a "holding site" for the purpose of temporarily storing derelict autos as they are collected, before they are removed to the recycling plant.

B. Disposal of the Collected Vehicles

1. The Government of Alberta should appoint a Central Project Administrator (possibly in the Department of the Environment) to co-ordinate the total provincial auto

disposal program. It would be his duty to record the location of the various approved holding sites and the number of discarded cars in the sites, and arrange for the economic removal of the hulks from the holding site to the recycling facilities. It would be the responsibility of the municipality to relay information on location of the holding site and number of cars there to the administrator.

2. It is recommended that wherever possible, private enterprise should be utilized in carrying out the various duties of this program, and that the tendering process be used to ensure as much impartiality and economy as possible. This would include the contracting of car crushers and strippers.

C. Financing the Program

1. It is recommended the Provincial Government, through the Department of Highways and its annual levy on Motor Vehicles Registration, assess each registered vehicle a two dollar ($2.00) levy to be used solely for financing a continuous derelict auto disposal program. The fund thus created would be dispersed to cover the following costs:

(a) Transportation of the hulks from the holding site to the recycling plant. This plant could be a shredder or baler, depending on the system selected

in a particular area.

(b) "Crushing" or "stripping" the cars at the holding site prior to the transportation to the recycling centre. The amount of money to be allotted per unit would be decided by tender and the actual choice of methods would depend upon the most economical option for the area; if a car could be crushed for five dollars, then five dollars would be available for stripping.

(c) Institution of a five dollar ($5.00) "finder's fee", to be handled through each municipality, as an incentive to assist in the collection of derelict automobiles. This would provide the municipalities with the option of encouraging citizens or private groups to collect derelict vehicles for the fee or else bringing in the hulks themselves and keeping the finder's fee to defray their expenses.

(d) Administration of the project, including the administrator and his office staff.

2. The money raised from any fines would be returned directly to the municipality involved in the particular court action.

D. Legislation

Additional legislation was recommended for making the program more effective.

1. Legislation requiring auto wreckers and similar salvage companies to keep their premises unobjectionable on aesthetic grounds should be developed. In

other words, they must develop substantive screens to prevent their establishments from becoming eyesores, and they must keep non-usable parts moving to the recycling centres. Salvage and auto-wrecking yards should be strongly encouraged to continually recheck their inventory and strip the vehicles as soon as possible in order that non-usable components may be immediately transferred to the recycling plant.

2. Legislation should be developed to make it an office to abandon a vehicle either on private or public property, subject to a substantial fine of at least $100.00 per item.

3. There should be specific legislation making it an offence to harbor derelict autos on private property where they may be offensive to neighbours.

4. There should be no more than one non-functional automobile, plus the parts for one complete additional car, on any private property. All cars in excess of this number could be licenced as antique autos or potentially operant motor vehicles, with the proper licence plates affixed to the car. The alternative for the owner of these cars is to take out a business licence which would then make his operation subject to the laws and regulations dealing with auto wreckers.

The following five items are also suggested for consideration:

1. Some type of "Full Thirty Day Warranty" should be attached to the purchase of all cars. If enacted, this legislation would ensure that vehicles no longer road-worthy would be immediately turned over to the disposal process; on the other hand those vehicles which are actual or potentially viable forms of transportation would have no problem being sold.

2. There should be some type of certification of road-worthiness for all cars over ten years old that are to be licensed.

3. The Government of Alberta should give serious consideration to modifying the present process whereby abandoned cars that are found are placed in a "Disposal Auction System" such that abandoned autos found not to be road-worthy immediately are taken out of circulation and forwarded to a recycling plant after being held a certain prescribed number of days.

4. In developing legislation it should be borne in mind that people may initially need a period of grace from three to six months to clean up present premises of derelict autos, but in the future, after receiving a complaint, the guilty person should have a limited time to clean up his premises, at the risk of a fine.

5. It may be necessary to consider some kind of "Title Law" legislation which would require all

sales of automobiles and similar vehicles to be legally registered events. Should a person then claim to have sold a car that is found abandoned and the sale was not registered, he would also be subject to a substantial fine, in the order of $100. Moreover, title law legislation might assist in tracking down of stolen cars.

V. DISCUSSION

A. Collection

There are many car disposal problems in Alberta that await a solution. Businesses and individuals have numerous vehicles and hulks in their possession which they probably do not want but yet cannot afford to dispose of. (Note: It costs a lot more per unit to dispose of a small number of vehicles than a large quantity.) The local community will not accept them because the council feels that a business should be able to pay for its own waste disposal costs, and in some instances the community does not even have a place for storing unwanted vehicles. As a result, these vehicles do not move and are the cause of complaints, possibly from the same citizens who formerly owned the vehicles. In view of this adverse public reaction, and the higher fencing and disposal costs necessary to prevent trouble, private businesses such as wreckers and garages are becoming increasingly reluctant to accept unwanted vehicles. Therefore, it is essential that all communities establish sites where vehicles can be legally deposited. The only existing alternatives for an individual are to deliver his old car to a processor himself, which is not practical, store it indefinitely if he owns property, or abandon it.

Locating vehicles in central depots or holding sites is preferable to having cars scattered all over the countryside. Since they must eventually be disposed of it is also

more economical when there is a large number in a single location.

Care must be exercised in the selection of the holding sites. Stockpiles of old vehicles do not look any better when they are publicly owned than when they are privately owned. The sites must be conveniently located where they will be screened from view by the landscape or else properly fenced to the same standards required by auto-wreckers. They must be an adequate size (approximately 1 acre per 100 cars), have positive grades for proper drainage, and possess good access roads. The use of specially designated areas at landfill sites would be convenient for disposing of the glass, tires, seats, upholstry, etc., when the vehicles are prepared for recycling.

B. Disposal

Vehicles should be disposed of in the manner which causes the least pollution. Recycling cars into steel is popular because it is generally believed to conserve natural resourses. This is not always true. There is a turning point after which more non-renewable resources are consumed by transporting and recycling the vehicle than are saved by re-using it. In addition, the smoke, heat, dust, and noise resulting from the preparation, transportation, and recycling processes might be more detrimental to the environment than compaction and burial of the vehicle. It becomes a question of deciding what is the most important. Should iron ore be conserved or

is saving energy sources more important? Should landfill space be saved at the expense of other less noticable and perhaps more limiting forms of pollution? These priorities will depend on the circumstances at a given time and a particular location (mass energy balance calculations versus limiting essential resource considerations). In addition, the aesthetics of different methods vary and these could also be a consideration.

The Maintenance Branch of the Department of Highways and Transportation has field personnel throughout the province. Their work is closely associated with the handling of abandoned automobiles under the Highway Development Act. A trial clean-up campaign and the subsequent tendering of 15,000 old cars to disposal firms was recently conducted by the branch, with some assistance from local governments. In view of this previous experience the Department of Highways would therefore be best qualified to tender and supervise the disposal contracts under a continuous program.

C. Financing

Some of the advantages of financing a provincial automobile disposal program by assessing an annual levy against each registered vehicle as part of the license fee are:

1. A small nominal yearly fee is easier for an individual to finance than a single large disposal charge.

2. An annual levy is easy to implement and admin-

ister. The Department of Highways already has billing and collection procedures for annual vehicle license plates renewal.

3. The cost of the ultimate disposal of a vehicle is distributed evenly over its useful lifetime and is paid by all the owners.

4. Since car owners are paying for the fund, there would be no precedent set of governmental assistance for waste disposal.

Some disadvantages are:

1. The owner(s) of a car which is used for 20 years will have paid four times as much for its disposal as the owner of the car that is disposed of after only 5 years.

2. Vehicle owners near the processors will subsidize the transportation costs necessary to recycle cars from more remote locations.

Of the estimated 50,000 vehicles that are retired annually in Alberta, about 15,000 are presently being disposed of in Edmonton, Calgary, and Red Deer at relatively little cost to these cities. The program should not interfere with this flow of vehicles. The remaining 35,000 vehicles are distributed throughout the other areas of the province, probably in close relationship to population distribution. In addition, there is a backlog of an estimated 50,000 vehicles which must be eventually contended with. Assuming that this backlog of existing vehicles is disposed of over a five-year period, there

would be an average of 45,000 vehicles per annum during the first five years. Based on an average cost of $15.00 per vehicle, a sum of $675,000 would be required annually.

A levy of $1.00 per vehicle would provide about $800,000 each year, as there were 563,724 cars and 245,796 trucks, or a total of 809,520 registered vehicles for the fiscal year ending March 31, 1972. If the monies are obtained by adding a $1.00 levy to the yearly automobile license fee, it will be necessary to enact the legislation under the Department of Highways Development Act. The 1973 license renewal form master tape will be printed for computer processing in early January, 1973. Notification by December 15, 1972 is required by the vehicles registration division in order to incorporate a fee change into the 1973 rates.

D. Legislation

It would appear that better as well as more extensive and faster car body disposal is desired by the public. A public opinion survey of 2031 households was conducted by the Department of the Environment during the summer of 1972. A question asking whether or not they would like to see a deposit-refund system on automobiles was answered "yes" by 69 percent of the respondents.

Title law respecting automobile ownership would require all automobile transactions to be legally registered events. The sale of a motor vehicle would have to notorized by both the

purchaser and vendor in order to transfer the certificate of title. It is a costly and time-consuming nuisance for both the public and the civil service. Whether or not it will become a necessary evil in Alberta depends on other factors such as the desire to control auto theft.

If title law for motor vehicles is introduced then vehicle identification could be cross-indexed with accurate and up-to-date ownership records. This process would aid in identifying the owners of abandoned cars, and these records could be further expanded to include a record of disposition for each automobile. Failure to register a transaction of ownership would have a penalty similar to that imposed for abandonment.

Until there is title law, it will not be practical to assist in the collection of vehicles by establishing a finders fee. The precautions necessary to make sure that this fee was used for the intended purpose would not be feasible. The holding sites would have to be supervised too closely if the fee were paid upon depositing the car at the site, and if it were not paid until after the car is actually processed then the delay of perhaps several years would defeat the purpose. Also, there is a problem with defining what constitutes a complete vehicle. How stripped can the car be and still qualify for the bounty?

The program should accept vehicles from wreckers, garages, and other businesses, as this would assist in keeping

these establishments cleaned-up. Also, it is unfair to make a legitimate, tax-paying business pay for its own waste disposal while at the same time removing the disposal problems of their main competitors; namely, individuals who strip cars on a small scale as a sideline. The alternative is to pass laws dictating how many vehicles an individual can have on his property before he is subject to the laws and regulations dealing with auto wreckers. This latter alternative would also require title law for automobiles in order to be effective, as would the enforcement of additional regulations dictating how long a business can store vehicles unstripped.

VI. CONCLUSIONS

1. In most areas the disposal of old car bodies is not economical for private industry; therefore, governments will have to become involved. At present, the job is not being handled to the satisfaction of the general public.

2. Provincial assistance will be necessary to achieve economical, effective, and appropriate car body disposal throughout Alberta.

3. All municipalities must be required to assume responsibility for the collection and disposal of derelict automobiles within their area in the same manner that they must provide facilities for garbage and other solid waste disposal. This requirement could be enacted by amending the Provincial Board of Health Regulations respecting the control of refuse disposal systems.

4. The provincial government can assist the municipalities in providing this necessary service by:

(a) Establishing an automobile disposal fund from monies derived from automobiles.

(b) Administering a provincially operated full-time derelict auto disposal program financed by the fund.

(c) Providing technological assistance such as selection of the holding site and the best disposal method for a particular location and circumstances.

(d) Providing the necessary legislation to assist municipalities with the collection of their vehicles.

5. Provincial assistance to the automobile disposal program should be limited to co-ordinating the preparation and removal of collected vehicles from the municipal holding sites and administering the contracting of this work with revenues from a motor vehicle disposal fund. This work would be handled best by the Department of Highways.

6. The Department of the Environment should implement the program. Thereafter, the role of the department should be limited to ensuring that the job is done properly, by enforcing the provisions of the Litter Act respecting unsightly property, drafting and administering other necessary regulations relating to environmental problems caused by automobiles, and ensuring that all municipalities keep their areas free of derelict vehicles as required. The department is already responsible for ensuring that cars are prepared by scrap processors and recycled at the steel mills in a manner which causes the least pollution possible.

7. The Department of Health approves and administers municipal landfill operations under the Provincial Board of Health Regulations respecting the Control of Refuse Disposal Systems. It is anticipated and hoped for that many of the derelict auto "holding sites" will be established at existing landfill operations. In order to avoid a conflict of interests, the approval of these holding sites should be the responsibility of the Health Department. An alternative would be for the Department of the Environment to assume this responsibility in

co-operation with the Health Department.

8. An annual disposal levy to be assessed against all registered motor vehicles as part of the license fee is easy to implement and administer. Since the funds would be derived solely from autos, it would not set a precedent for anyone to request governmental financial assistance for waste disposal or pollution control. An annual levy of $1.00 per motor vehicle would provide sufficient revenue for disposing of the collected vehicles.

9. The option of disposing of compacted automobiles by burying them as well as by recycling must be clearly retained under the program to provide flexibility.

10. There are laws in effect already for handling abandoned vehicles on public or private property. More stringent penalties for abandoning vehicles should be preceded by the provision of an adequate number of authorized disposal sites.

11. Legislation for effecting involuntary removal of vehicles from private property, where they may be offensive to neighbours, should also be preceded by a working system for disposing of vehicles offered voluntarily by the public (garages and wrecking businesses included -- but possibly for a fee). The recently introduced Litter Act with its provisions for issuing clean-up orders will be of assistance.

12. The Department of Highways would have to enact title law legislation for automobiles as a prerequisite to

more effective enforcement of abandonment laws, regulations governing the duration that specific numbers of derelict vehicles can be stored on private property, and payment of bounties to aid collection. These are longer term considerations which can be introduced if a trial period of the program proves they are necessary.